Amendments to the Written Description:

Please replace paragraph [0014] with the following amended paragraph:

[0014] An adaptive temperature dependent feedback clock control system and method for adaptively varying a frequency of a clock signal to a circuit such that the circuit may operate at a maximum safe operating clock frequency based on a circuit junction temperature. The circuit may be a host processor, a co-processor, such as a graphics co-processor, a memory, or any suitable device for receiving the clock signal. The adaptive temperature dependent feedback clock control system, herein referred to as a clock control system includes a thermal sensor and a temperature dependent dynamic overclock generator circuit. The thermal sensor detects a junction temperature corresponding to at least a portion of the circuit on a semiconductor die. The clock control system adapts the frequency of the clock signal according to the junction temperature by monitoring the circuit junction temperature via the thermal sensor to form a feedback loop. According to one embodiment, the frequency of the clock signal is increased from a first frequency to at least one of a second and a third frequency if the junction temperature is below a first junction temperature threshold.

Please replace paragraph [0024] with the following amended paragraph:

[0024] As shown in step 230, the temperature dependent dynamic overclock generator circuit 40 increases an operating frequency of the clock signal 30 above the nominal operating frequency associated with a maximum junction temperature in response to determining that the junction temperature is below the maximum rated junction temperature for the integrated circuit die 60. As previously stated above, since during normal operating conditions the junction temperature is typically much lower than the maximum rated junction temperature, the clock

frequency may be increased above the nominal operating frequency safely without causing any damage to circuit 20. Accordingly, the temperature dependent frequency clock generator circuit 40 may increase the frequency of a clock signal 30 from a first frequency corresponding to a first junction temperature to at least one of a second frequency corresponding to a second junction temperature and a third frequency corresponding to a third junction temperature, when the detected junction temperature is less than at least one of: the second junction temperature and the third junction temperature, such that second junction temperature and the third junction temperature is less than the [[first]]maximum rated junction temperature.